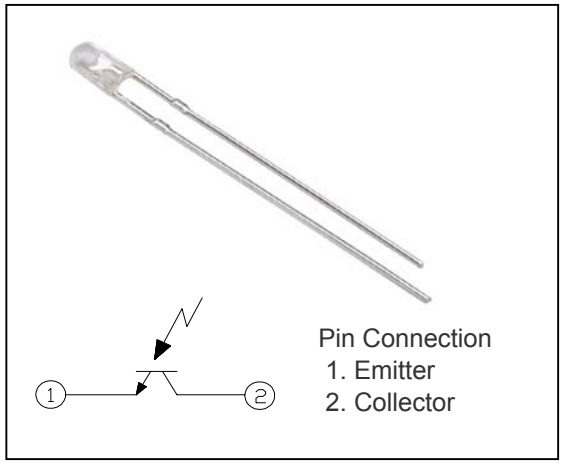
Photo Transistor

KDT3001A

Description

The KDT3001A is a high-sensitivity NPN silicon phototransistor mounted in Φ 3mm(T-1) all plastic mold type.



RoHS

Features

- Φ3mm(T-1) all plastic mold type
- Colorless transparency lens
- Single phototransistor output

Applications

- Optical detectors/switch
- VCR, Camcoders
- Floppy disk drivers
- Tape End sensor

Absolute Maximum Ratings

[T_A = 25℃]

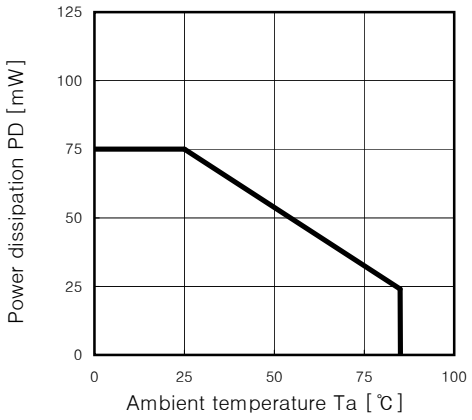
Parameter	Symbol	Min.	Max.	Max.
Collector-Emitter Voltage	V_{CEO}	-	35	V
Emitter-Collector Voltage	V_{ECO}	-	6	V
Collector Current	I_C	-	20	mA
Collector Power Dissipation	P_C	-	75	mW
Operating Temperature	Topr.	-20	85	℃
Storage Temperature	Tstg.	-30	85	℃
Soldering Temperature*1	Tsol	-	260	℃

*1 : MAX 5s

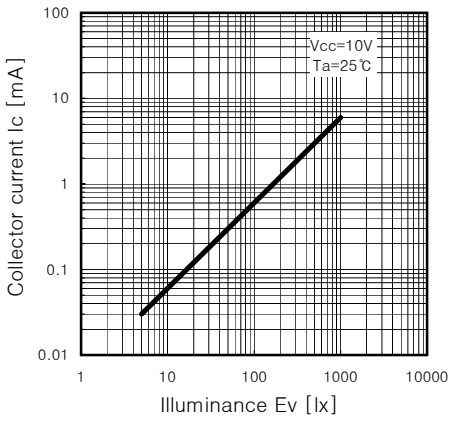
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

Rating and Characteristic Curves

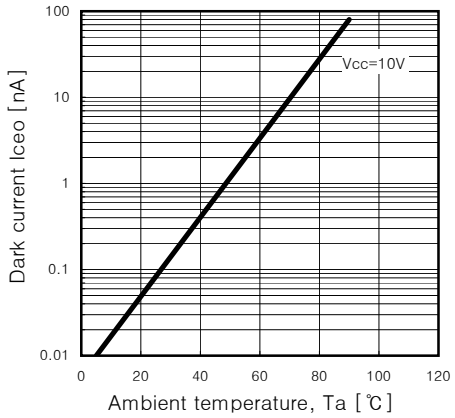
Power dissipation Vs. Ambient temperature



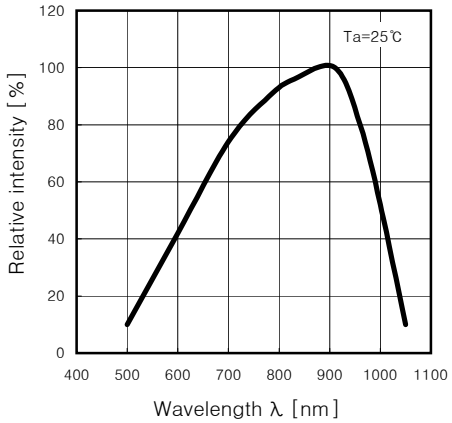
Collector current Vs. Illuminance



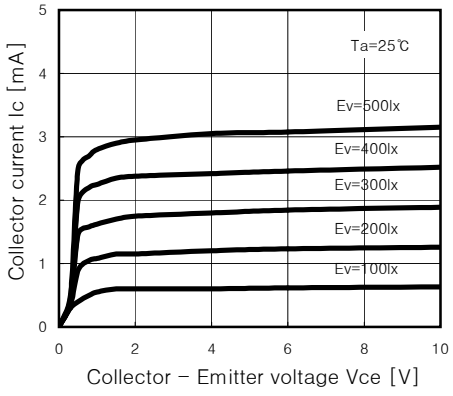
Dark current Vs. Ambient temperature



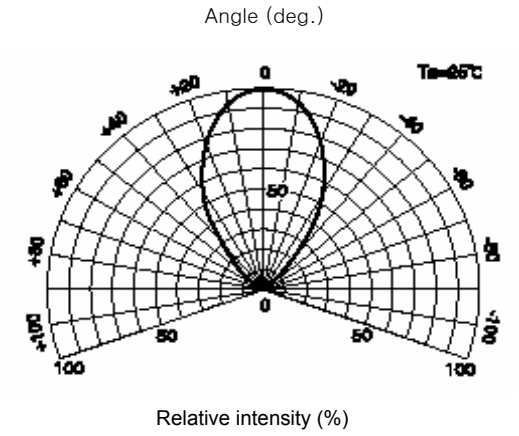
Relative intensity Vs. Wavelength



Collector current Vs. Collector - Emitter voltage



Radiant Pattern



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KDT3001A

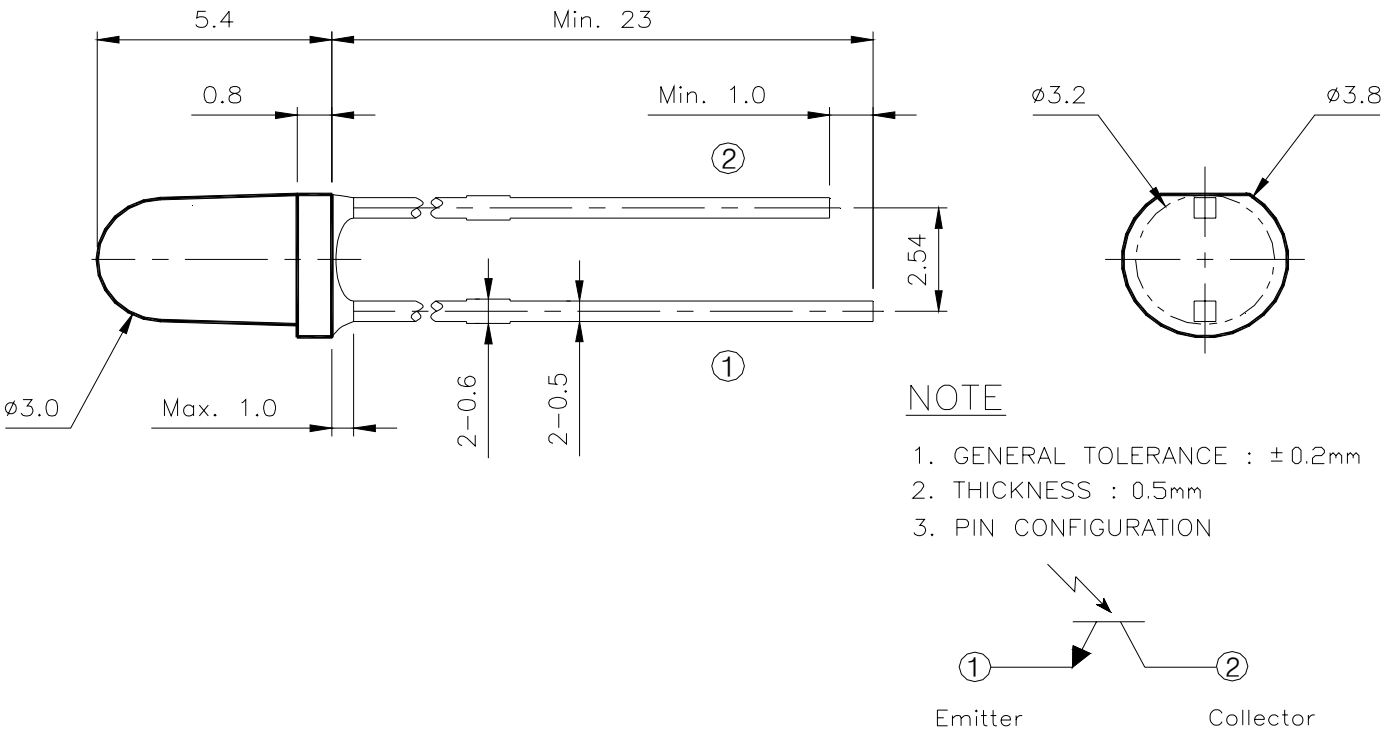
Electrical Characteristics

[T_A = 25℃]

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dark Current	I_{CEO}	Ev=0, V_{CE}=10V	-	-	200	nA
Collector Current	I_{CEL}	Ee=1mW/cm^2, V_{CE}=5V	1.0	3.0	-	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	Ev=1,000lux, I_C=0.8mA	-	0.2	0.4	V
Spectral Sensitivity	λ	-	400	-	1050	nm
Peak Sensitivity Wavelength	λ_P	-	-	880	-	nm
Switching time (Rise time)	tr	Vcc=10V, I_{CE}=1mA, RL=100Ω	-	2.5	-	μs
Switching time (fall time)	tf		-	4.7	-	μs
Half Angle	Δθ	-	-	±30	-	deg

Package Outline Dimensions

(Unit : mm)



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